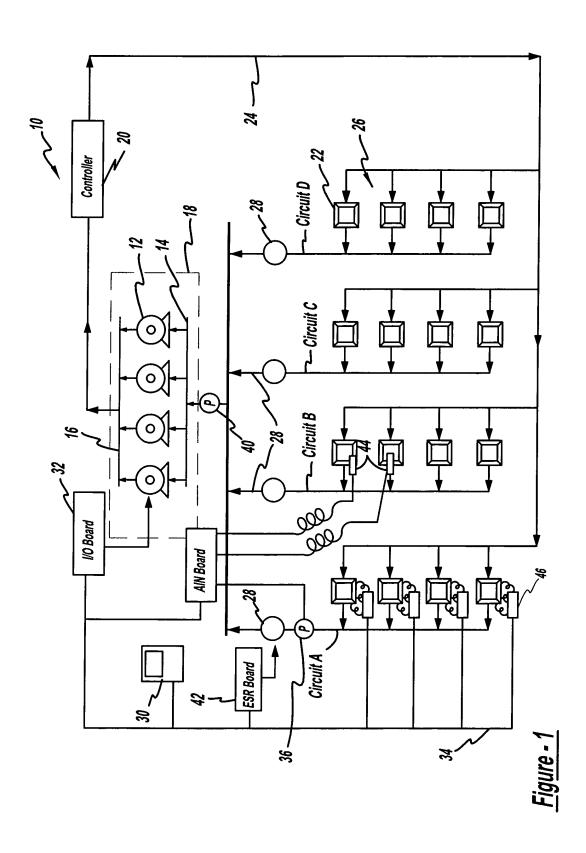
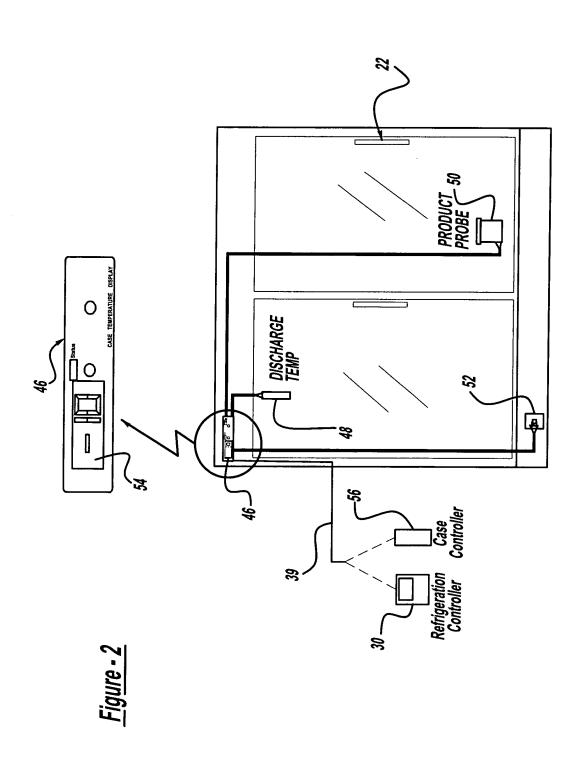
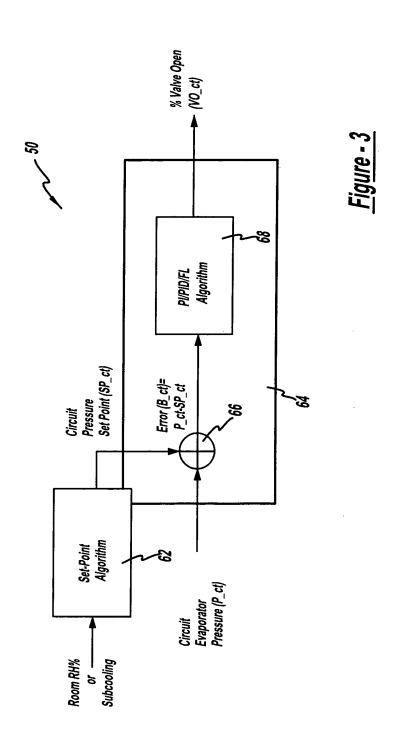
Title: MFTHOD AND ARRARATUS FOR REFRIGERATION SYSTEM CONTROL HAVING ELECTRONIC EVAPORATOR PRESSURE REGULATORS

Inventor: Abtar Singh et al. Atty. Ref. No.: 4731-000001/COD



Title: MFTHΩD AND APPARATI IS FOR BEERIGERATION SYSTEM CONTROL HAVING ELECTRONIC EVAPORATOR PRESSURE REGULATORS Inventor: Abtar Singh et al. Atty. Ref. No.: 4731-000001/COD

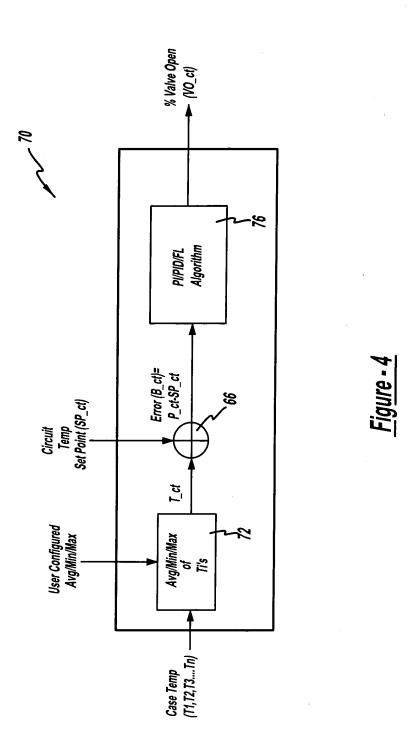


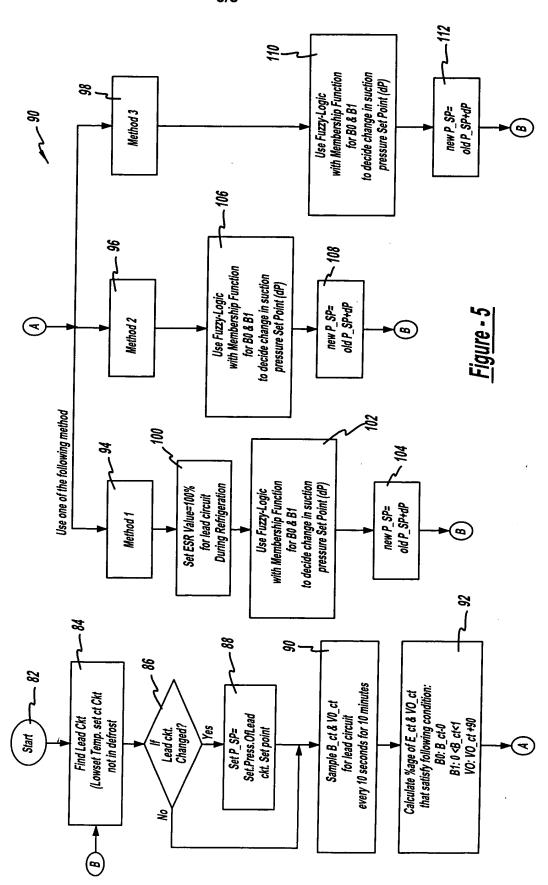


Title: METHΩD AND APPARATUS FOR REFRIGERATION SYSTEM CONTROL

* HAVING ELECTRONIC EVAPORATOR PRESSURE REGULATORS
Inventor: Abtar Singh et al.

Atty. Ref. No.: 4731-000001/COD





Title: MFTHOD AND APPARATI IS FOR REFRIGERATION SYSTEM CONTROL

HAVING ELECTRONIC EVAPORATOR PRESSURE REGULATORS
Inventor: Abtar Singh et al.

Atty. Ref. No.: 4731-000001/COD

6/8

Figure - 6

Sample Calculation: For E0=40%: E1=30%

Step1: Fuzzification:

For E0=40% from Mem. Function Chart for E0 we get E0_Lo=0.25; E0_Avg=0.75 For E1=30% from Mem. Function Chart for E1 we get E1_lo=0.5; E1_Avg=0.5

Step2: MinMax: Refer to Truth Table

E0 Lo=0.25 and E1 Lo=0.5 => NBC=Min/0.25,0.50|=0.25

E0_Lo=0.25 and E1_Avg=0.5 => NBC=Min(0.25,0.50)=0.25

E0 Avg=0.75 and E1 Lo=0.5 => PSC=Min(0.75,0.50)=0.50

Now take maximum of common one that is PSC=0.50; NSC=0.25; NBC=0.25 E0_Avg=0.75 and E1_Avg=0.5 => PSC=Min(0.75,0.50)=0.50

Step3: Defuzzification Step:

Net Pressure set Point Change=+1*PSC-1*NSC-2*NBC/ (PSC+NSC+NBC)

=+1*0.50-1*0.25-2*0.25/ (0.5+0.25+0.25)

8 8 S 2 Membership Function for E1 B 2 2

ŭ MA 6.4 0.4 0.2 5.00 0.8

8 8 8

Membership Function for EO

EO AVG

E0 Lo

2, 6, 8,

MA:6 0.4

0.2

Graph 6A

E1 is the percentage of E_ct that is between zero anf 1 F in 10 minute duration Note:EO is the percentage of E_ct that is less than zero in 10 minute duration

Graph 6B

TRUTH TABLE 6C

PSC 8 ¥ 莹 Avg SS SC BBC SC DBC 2 MBC E1(J) Avg. 9 Ξ 1

Quantity Changed:

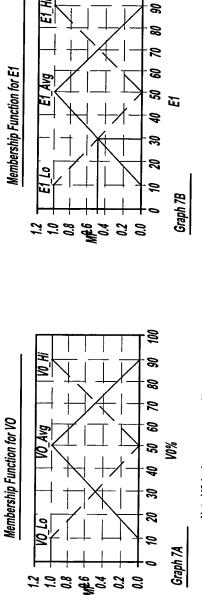
NSC: Negative Small Change=-1 Psi NBC: Negative Big Change=-2 Psi NC: No Change=0 Psi

PSC: Positive Small Change=+1 Psi PBC: Positive Big Change=+2 Psi

Title: MFTHOD AND APPARATI IS FOR REFRIGERATION EVETEM CONTROL HAVING ELECTRONIC EVAPORATOR PRESSURE REGULATORS Inventor: Abtar Singh et al.
Atty. Ref. No.: 4731-000001/COD

7/8

\$



Note:VO is the percentage of V_ct that is less than 90% valve opening in 10 minute duration E1 is the percentage of E_ct that is between zero anf 1 F in 10 minute duration

	TRUT	TRUTH TABLE 7C		
	E1(J)	1	2	3
No(I)		07	Avg	ļH
1	70)Bd)BC	DBC
2	Avg.)Sd	PSC	DSC
33	Hi	28N	SN	J/V

Quantity Changed:

NBC: Negative Big Change=-2 Psi

NSC: Negative Small Change=-1 Psi

NC: No Change=0 Psi

PSC: Positive Small Change=+1 Psi PBC: Positive Big Change=+2 Psi

Title: METHOD AND APPARATUS FOR REFRIGERATION SYSTEM CONTROL
HAVING ELECTRONIC EVAPORATOR PRESSURE REGULATORS
Inventor: Abtar Singh et al.
Atty. Ref. No.: 4731-000001/COD

